

## Automatic Check for Cyclic Operating Conditions for SOI Circuit Simulation

### Abstract of the Disclosure

An improved hardware circuit simulation method in particular for history-dependent and cyclic operation-sensitive hardware circuits, like SOI-type hardware, checks for correct cyclic boundary conditions by performing a first run of a DC simulation with input voltage conditions belonging to CYCLE START, and by carrying out a second DC simulation with input voltage conditions belonging to CYCLE STOP. After comparing the results, e.g., comparing the node voltages, any mismatches can be determined which serve as a hint to non-compatibility with cyclic operation. Thus, the design is able to be re-designed before being simulated in vain with a great amount of work and computing time. A transient simulation can be appended for automated correction of dynamic errors.